



# Matea Rogić

Laboratory for Radioecology  
Division for Marine and Environmental Research  
Rudjer Boskovic Institute  
Zagreb, Croatia



- ▶ Ruđer Bošković Institute is the largest multidisciplinary research centre in Croatia with strengths in basic science and applied science research as well as higher education

- ▶ It was founded in 1950 as a centre for advanced research and named after the famous 18th century Croatian scientist Josip Ruđer Bošković (1711– 1787)
- ▶ 12 Divisions with a little over 900 employees

- ▶ Organisational unit of the Division for Marine and Environmental Research
- ▶ 9 employees:
  - 2 geologists – gamma spectrometry
  - 5 chemists – alpha/beta spectrometry
  - 2 technicians

## ► Scientific research

- investigation of biogeochemical behavior of natural and artificial radionuclides in the environment
- development and advancement of methods and procedures for alpha, beta and gamma radioactivity measurements

- ▶ Accredited by Croatian Accreditation Agency **HRN EN ISO/IEC 17025:2007** for five in-house methods and one international standard method for determination of:
  - **radionuclides by high resolution gamma spectrometry** in sediments, soil, food, biota, aqueous solutions and water
  - **$^{89,90}\text{Sr}$**  in sediments, soil, food, biota, aqueous solutions and water
  - **$^{55}\text{Fe}$**  in aqueous solutions
  - **$^3\text{H}$**  in natural and waste waters
  - **total alpha/beta activity concentrations** in non saline water (ISO 10704)

# Personal data



- ▶ Graduated Chemistry at the Faculty of Science, University of Zagreb
- ▶ Postgraduate student in Chemistry at the Faculty of Science, University of Zagreb
- ▶ **Research assistant at RBI Laboratory for Radioecology**



# Field of work



## ► Scientific research – radiochemistry

- development of methods for chromatographic isolation and separation of isotopes from natural samples
- alpha spectrometry and LSC in determination of alpha and beta emitters ( $^{234,238}\text{U}$ ,  $^{226,228}\text{Ra}$ ,  $^{210}\text{Pb}$ ,  $^{210}\text{Po}$ )
- incorporation of methods in routine analyses of environmental samples – expansion of accreditation



# Field of work



- ▶ Scientific research – radioecology
  - investigation of radionuclide migration mechanisms in the environment
  - dose assessment – food and drink



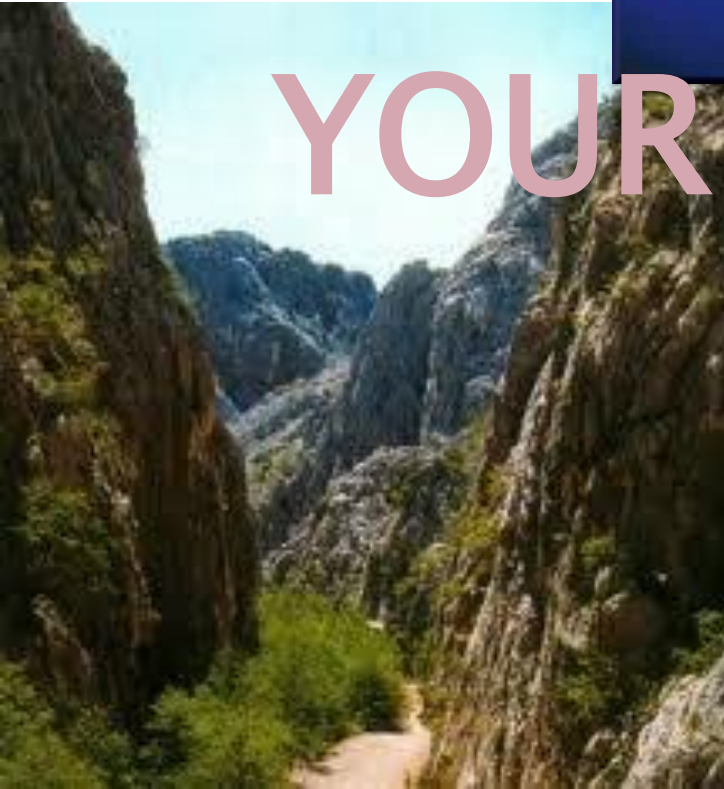


# Field of work



## ► Coworker in environmental monitoring

- Nuclear Power Plant Krško (Slovenia) – Sava river (water, sediments, biota) and effluents from the power plant
  - gamma spectrometry, total alpha/beta
- Nuclear Power Plant Pakš (Hungary) – Danube river (water, sediments, biota)
  - gamma spectrometry
- Mediterranean Mussle Watch programme along the Croatian coast of the Adriatic Sea
  - $^{210}\text{Po}$  and  $^{210}\text{Pb}$  determination, gamma spectrometry



THANK YOU FOR  
YOUR ATTENTION

